LAC Meeting #5

Thank you for joining us!
The webinar will begin shortly.

Before we begin, please note:

- The public audience will automatically be placed on mute
- Those providing comments on agenda items during the public comment period will be unmuted at the proper time
- The webinar is being recorded. A video link will be made available at www.honolulu.gov/opala/newlandfill

AGENDA

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CALL TO ORDER
ROLL CALL
ADMINISTRATIVE MATTERS
PUBLIC COMMENT PERIOD

2

APPROVAL OF MEETING 4 MINUTES

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DISCUSSION AND ACTION
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PRESENTATION AND DISCUSSION
Final Site Evaluation Criteria

Evaluation Scoring Methodology

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ANNOUNCEMENTS AND ADJOURNMENT

LANDFILL ADVISORY COMMITTEE

Steven Chang

Environmental Regulation

Suzanne Jones

Solid Waste

Ken Kawahara

Professional Engineer

Civil Engineering

Emmett Kinney

General Contracting

Brennon Morioka

Professional Engineer

Civil Engineering

James Nakatani

Agribusiness Development

Cynthia Rezentes

Classical Electrical Engineering

Community Advocate

Trisha Kehaulani Watson

Environmental Justice

Cultural Resources

MEETINGS

1. October 4, 2021 - 2 hours
   - Introduction and Foundation
2. October 25, 2021 – 2 hours
   - LAC Rules and Limited Meeting Re-vote
3. November 3, 2021 – 3.5 hours
   - Site Visits – PVT Landfill, Waimānalo Gulch Sanitary Landfill, and H-POWER
4. December 14, 2021 - 2 hours
   - Starting Evaluation Criteria and Scoring Methodology
   - Homework: Suggest sites and/or additional evaluation criteria
5. February 7, 2022 - 2 hours
   - Final Evaluation Criteria and Potential Landfill Sites
   - Homework: Assign Weights to Evaluation Criteria
6. March 2022 - 2 hours
   - Objective and Subjective Evaluation of Potential Landfill Sites
   - Homework: Score potential landfill sites using subjective criteria
7. April 2022 - 2 hours
   - Evaluation Results, Site Rankings, Community Benefits, and Report Contents
   - Homework: Brainstorm community site benefits
8. June 2022 - 2 hours
   - Draft Report Revisions and Potential Community Benefits
   - Conclusion

ENV Director's Introduction

ADMINISTRATIVE MATTERS

ORAL PUBLIC COMMENTS

- 2 minutes per person
- Registered commenters first, then any unregistered commenters (raise hand on Webex, *3 on phones)
- When called upon, you will be unmuted
- Please state your name and agenda item on which you are speaking

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Approval of Prior Meeting Minutes

- LAC Meeting #4 – December 14, 2021

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ANNOUNCEMENTS AND ADJOURNMENT

Board of Water Supply Presentation Discussion

OPEN TO THE COMMITTEE

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Final Site Evaluation Criteria

Changes from Draft to Final Criteria 1

- Addition of “Location with regard to the Board of Water Supply No Pass Zone”
  - Based on the Board of Water Supply Presentation not having a landfill above a drinking water aquifer is of primary concern
- Removal of “Geological and Hydrogeological Conditions”
  - Related to potential impacts to groundwater, captured by the above-mentioned added criteria
  - Will be addressed thoroughly in the Environmental Impact Statement process
- Addition of “Proximity to” for most subjective criteria, i.e., “Significance of Proximity to Nearby Surface Water”
  - Captures the effect of potentially having a landfill near the identified characteristics of the area, not just the importance of those characteristics

Changes from Draft to Final Criteria 2

- Adjusted Important Agricultural Lands (IAL) criteria to “Location with regard to Important Agricultural Lands of the Hawai‘i Land Use Commission” to clarify that this considers if the site is “within or outside” of IAL areas
- Removed “Beneficial Reuse” from “Significance of Land Use Displacement” to clarify this does not pertain to beneficial reuse after closure
- Added “Environmental Justice:” ahead of “Significance of Location Relative to Identified Community Disamenties” to clarify the intent of the criteria
- Other minor text changes for clarity

Objective
Scoring Criteria

1. Landfill Capacity
2. Land Acquisition, Landfill Development, and Roadway Improvement/Infrastructure Costs
3. Time to Acquire Land and Develop Landfill
4. Location Relative to H-POWER
5. Effect on Traffic and Roadway System
6. Effect of Precipitation on Landfill Operations
7. Location with regard to Important Agricultural Lands of the Hawai‘i Land Use Commission
8. Location with regard to the BWS No Pass Zone
9. Municipal Water Well within 1,000 feet

1 Landfill Capacity

Description	Total amount of waste that can be placed in the landfill
Explanation	The City and County of Honolulu (CCH), Department of Environmental Services (ENV) intends to develop a new landfill with a minimum 20 years of site life, which equates to an estimated 21.5 million cubic yards of disposal capacity. This estimated disposal capacity is based on standard assumptions, including projected waste generation and recycling rates, waste compaction densities, and the estimated closure date of the existing construction and demolition landfill, PVT Landfill. A larger landfill would typically require more land and capital costs; however, due to the lengthy permitting and development timeline for a new landfill (roughly 10 years), the anticipated high cost associated with siting and development, as well as an increasingly limited amount of land available for landfills, among several other factors, it is impractical to design a landfill with a lifespan of less than 20 years.

2 Land Acquisition, Landfill Development, and Roadway Improvement & Infrastructure Costs

Description

Cost to acquire land, develop the landfill site, and complete all required roadway and infrastructure improvements to support the landfill

Explanation

ENV anticipates that developing a new landfill will require a significant financial investment by the CCH. Total development cost estimates will be completed for each landfill site, including acquisition, design, permitting, and construction costs, as well as required ancillary infrastructure improvements in the vicinity of the site to support heavy truck traffic. Differences in development cost estimates for each site reflects variations in site conditions and locations.

3 Time to Acquire Land and Develop Landfill

Description	Time to complete the land acquisition process and develop the landfill site for waste acceptance
Explanation	The land acquisition process will need to be completed either through condemnation, direct purchase, or a long-term lease. The time it will take to acquire and develop each site will be estimated by ENV and its consultants. Development planning and design is closely tied to the land acquisition method and timeline. When acquiring and developing the landfill site, ENV will strive to create scheduling efficiencies to reduce the project timeline to the greatest extent possible. The current landfill is mandated to stop accepting waste on March 2, 2028.

4 Location Relative to H-POWER

Description	Driving distance to/from H-POWER
Explanation	The location of the new landfill directly affects ENV's operational and contractual costs, including the costs to transport waste, ash, and residue from H-POWER. If the landfill is more than 12 miles from H-POWER, by contract, ENV incurs additional ash and residue hauling fees. Additionally, the further away the landfill is from population centers, transportation of waste to the landfill when necessary will be more costly.

5 Effect on Traffic and Roadway System

Description	The landfill's effect on traffic and the roadway system
Explanation	ENV anticipates increased traffic and roadway system impacts in the vicinity of the new landfill site, as well as between the new landfill site and H-POWER. The extent of roadway system impacts are commensurate with the driving distances between H-POWER and the landfill. Additionally, increased waste hauler traffic could impact local traffic and roadway systems. Actual impacts would be addressed during the Environmental Impact Statement process.

6 Effect of Precipitation on Landfill Operations

Description	Effect of precipitation on operation of the landfill
Explanation	The amount of precipitation a landfill site receives directly impacts landfilling operations and costs, and could increase environmental and human health risks. The more precipitation a landfill site receives, the greater the likelihood of challenging operational conditions and environmental effects related to stormwater runoff and leachate management.

7 Location with regard to Important Agricultural Lands of the Hawai‘i Land Use Commission

Description

Location of the landfill site within or outside of Important Agricultural Lands (IAL) designated by the Hawai‘i Land Use Commission

Explanation

A landfill site located in IAL areas will limit the use of that land for agricultural purposes. Additionally, due to restrictive land use requirements, permitting and developing a landfill site may become more challenging the closer that site is located within an IAL area.

8 Location with regard to the BWS No Pass Zone

Description	Location of the landfill site within or outside of the No Pass Zone established by the Board of Water Supply
Explanation	The No Pass Zone is defined as “areas in which the installation of waste disposal facilities, which may contaminate groundwater resources used or expected to be used for domestic water supplies, shall be prohibited”.

9 Municipal Water Wells within 1,000 feet

Description	Municipal water wells within a 1,000 feet buffer zone
Explanation	Standard solid waste industry practice is not to site a landfill in close proximity to a municipal or community water well. The United States Environmental Protection Agency does not regulate set-back requirements; however, many states have established their own minimum requirements. The Hawai‘i Wellhead Protection Program requires a minimum 1,000-foot set-back from potential contaminating activities, such as a landfill site.

Subjective
Scoring Criteria

10 Significance of Land Use Displacement/Beneficial Reuse

11 Significance of Proximity to Ecologically Important Areas

12 Significance of Proximity to Nearby Surface Water

13 Significance of Proximity to Nearby Archaeological & Cultural Resources

14 Significance of Proximity to Nearby Parks & Recreation Facilities

15 Significance of Proximity to Nearby Public Commercial Facilities

16 Significance of Location Relative to Identified Community Disamenities

17 Significance of Effect on Established Public View Planes

10 Significance of Land Use Displacement

Description	Significance of displacement of existing land use
Explanation	Land use information identified through review of various Hawaiʻi and CCH department records for the landfill site is provided for reference and consideration.

11 Significance of Proximity to Ecologically Important Areas

Description	Significance of the direct and indirect effects to identified ecologically important areas within a one-half-mile buffer zone
Explanation	A list of ecologically important areas as identified through review of various federal agency and Hawai‘i department records within a one-half-mile buffer zone of the landfill site is provided for reference and consideration.

12 Significance of Proximity to Nearby Surface Water

Description	Significance of the direct and indirect effects to identified surface water bodies within a one-half-mile buffer zone
Explanation	A list of surface water bodies as identified through review of various federal agency and Hawai‘i department records within a one-half-mile buffer of the landfill site is provided for reference and consideration.

13 Significance of Proximity to Nearby Archaeological and Cultural Resources

Description	Significance of the direct and indirect effects to identified archeological and cultural resources within a one-half-mile buffer zone
Explanation	A list of archaeological and cultural resources as identified through review of State of Hawai‘i Department of Land and Natural Resources, State Historic Preservation Division records within the landfill site boundary and within one-half-mile buffer of the site is provided for reference and consideration.

14 Significance of Proximity to Nearby Parks and Recreation Facilities

Description	Significance of the direct and indirect effects to identified parks and recreation facilities within a one-half-mile buffer zone
Explanation	A list of parks and recreation facilities as identified through review of various federal agency, and Hawai‘i and CCH department records within a one-half-mile buffer zone of the landfill site is provided for reference and consideration.

15 Significance of Proximity to Nearby Public Commercial Facilities

Description	Significance of the direct and indirect effects to identified public use commercial facilities within a one-half-mile buffer zone
Explanation	A list of public use commercial facilities as identified through review of CCH Department of Planning and Permitting records within a one-half-mile buffer zone of the landfill site is provided for reference and consideration.

16 Environmental Justice: Significance of Location Relative to Identified Community Disamenities

Description	Significance of the location of the landfill site relative to identified community disamenities
Explanation	A list of operational community disamenities, including landfills, power plants, wastewater treatment plants, and petroleum refineries, on Oʻahu as identified through review of various federal agency, and Hawaiʻi and CCH department records is provided for reference and consideration.

17 Significance of Effect on Established Public View Planes

Description	Significance of effect on established public view planes for local communities
Explanation	A list of communities where public view planes could potentially be affected from development of the landfill site is provided for reference and consideration.

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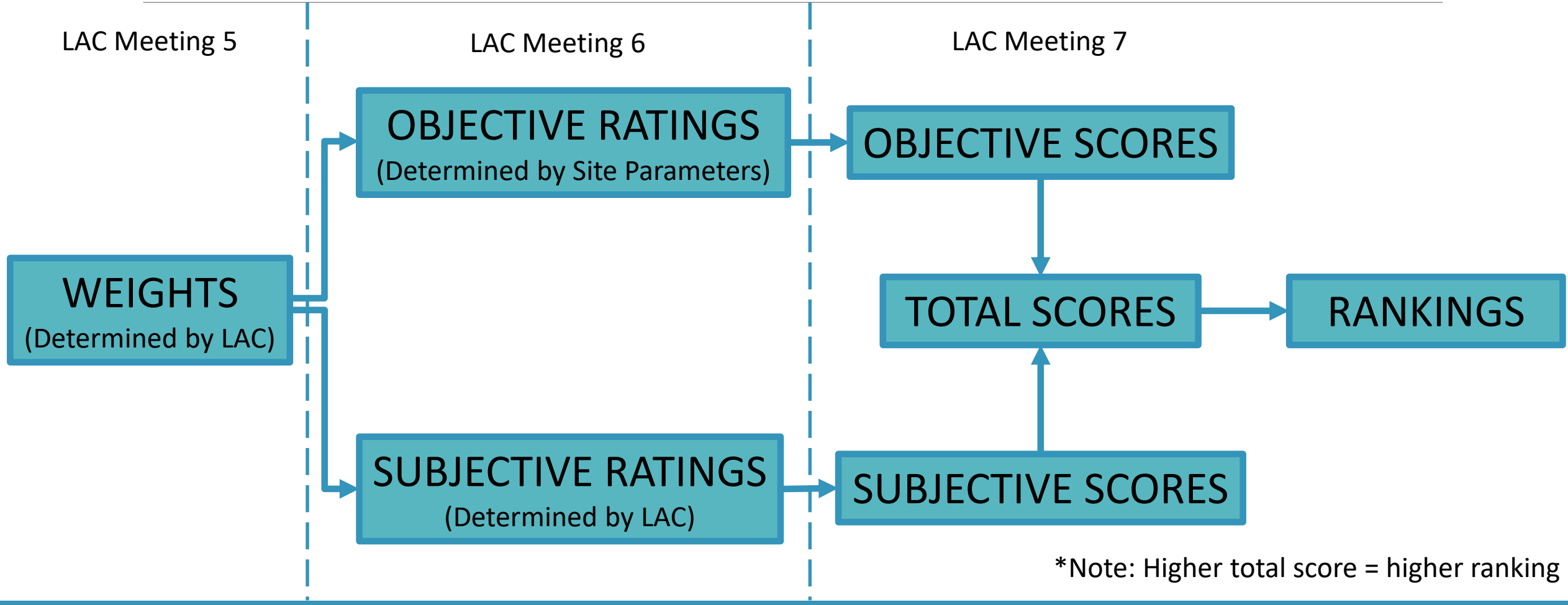
Evaluation Scoring Methodology Purpose of Presentation

- Detail the entire scoring process
- Provide an transparency for the process
- Try to be clear on what is to be entered
- Allow for questions to be asked
- Focus on Weights (after this meeting)
- Ratings will be done after Meeting 6 (with recap)
- Weight and Rating will be combined to generate Scores

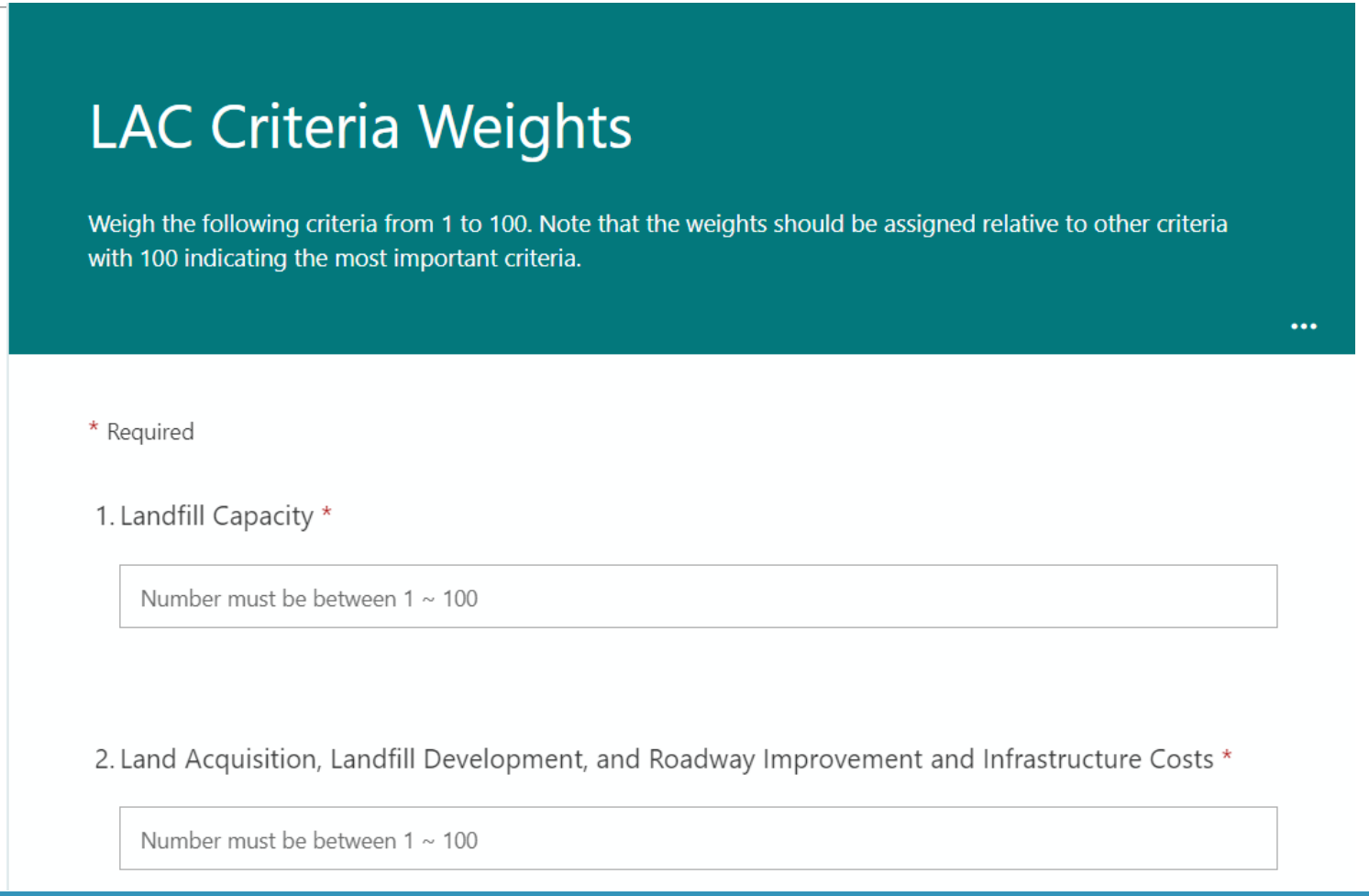
Evaluation Process Flow



*Note: Higher total score = higher ranking

Microsoft (MS) Forms Form

- Survey Format
- Separate Forms for:
  - Weights (LAC M5)
  - Subjective Ratings (LAC M6)



MS Form Output in Excel

	B	C	D	E	F	G
	Start time	Completion time	Email	Name	Landfill Capacity	Estimated Land Acquisi
2	1/7/22 11:47:25	1/7/22 11:55:55	anonymous		80	90
3	1/7/22 14:14:39	1/7/22 14:24:35	anonymous		75	50
4	1/7/22 14:19:22	1/7/22 14:26:08	anonymous		81	73
5	1/7/22 15:45:15	1/7/22 15:59:13	anonymous		20	60
6	1/7/22 16:09:57	1/7/22 16:53:49	anonymous		80	60
7	1/10/22 7:58:35	1/10/22 8:29:14	anonymous		99	98
8	1/10/22 13:46:37	1/10/22 14:10:33	anonymous		88.5	71
9	1/11/22 10:31:32	1/11/22 11:18:07	anonymous		65	60

*Disclaimer: All values displayed were input were for testing purposes only, do not reflect the views of any of the parties involved, and are not intended to influence scoring.

Weights

- Importance of criteria relative to each other
- Maximum weight = 100
- Minimum weight = 1
- Average Weight used in Score calculations
- Criteria can have equal weights
- Example:

Weight	Criteria
100	Criteria 5
50	Criteria 2
50	Criteria 3
25	Criteria 1

Weight Assistance Form

- Fill out before going to the MS Form
- Allows LAC member to play with weights and order by weight
- Complete weights in MS Form by February 14, 2022

Landfill Advisory Committee Weight Assista

Weight	No.	Criteria	Description
	1	Landfill Capacity	Total amount of waste that can be placed in the landfill
	2	Land Acquisition, Landfill Development, and Roadway Improvement and Infrastructure Costs	Cost to acquire land, develop the landfill site, and comple infrastructure improvements to support the landfill
	3	Time to Acquire Land and Develop Landfill	Time to complete the land acquisition process and devel
	4	Location Relative to H-POWER	Driving distance to/from H-POWER
	5	Effect on Traffic and Roadway System	The landfill's effect on traffic and the roadway system
	6	Effect of Precipitation on Landfill Operations	Effect of precipitation on operation of the landfill
	7	Location with regard to Important Agricultural Lands of the Hawai'i Land Use Commission	Location of the landfill site within or outside of Important A the Hawai'i Land Use Commission
	8	Location with regard to the Board of Water Supply No Pass Zone	Location of the landfill site within or outside of the No Pas Water Supply
	9	Municipal Water Wells within 1,000 feet	Municipal water wells within a 1,000 feet buffer zone
	10	Significance of Land Use Displacement	Significance of displacement of existing land use
	11	Significance of Proximity to Nearby Ecologically Important Areas	Significance of the direct and indirect effects to identifiec one-half-mile buffer zone
	12	Significance of Proximity to Nearby Surface Water	Significance of the direct and indirect effects to identifiec mile buffer zone
	13	Significance of Proximity to Nearby Archaeological and Cultural Resources	Significance of the direct and indirect effects to identifiec within a one-half-mile buffer zone
	14	Significance of Proximity to Nearby Parks and Recreation Facilities	Significance of the direct and indirect effects to identifiec one-half-mile buffer zone
	15	Significance of Proximity to Nearby Public Commercial Facilities	Significance of the direct and indirect effects to identifiec a one-half-mile buffer zone
	16	Environmental Justice: Significance of Location Relative to Identified Community Disamenities	Significance of the location of the landfill site relative to ic
	17	Significance of Effect on Established Public View Planes	Significance of effect on established public view planes f

Weight Question in MS Form

11. Significance of Proximity to Nearby Ecologically Important Areas *

Number must be between 1 ~ 100

Weight Question Output in Excel

	Q
	Significance of Proximity to Ne
	35
	40
	48
	60
	50
	98
	74
	50
AVERAGE	56.88

Weight Entry Completion

Rating

- Numerical value assigned to each site based on the favorability of the site
- Minimum numerical value = 0
- Maximum numerical value = 6
- Integral values only
- Sites can have equal ratings
- Average ratings per site used in score calculation

Rating Question in MS Form

Significance of Proximity to Nearby Ecologically Important Areas (direct and indirect effects of the location of the landfill relative to ecologically important areas within one-half-mile, with 0 being no effect and 6 being extremely significant effect) *

	0	1	2	3	4	5	6
1	○	○	○	○	○	○	○
2	○	○	○	○	○	○	○
3	○	○	○	○	○	○	○
4	○	○	○	○	○	○	○
5	○	○	○	○	○	○	○

Rating Question Output in Excel

Significance of Proximity to Nearby Ecologically Important Areas, Site 1

ID	SPEIA1	SPEIA2	SPEIA3	SPEIA4	SPEIA5
2	1	1	1	4	0
3	0	0	0	2	2
4	2	3	6	1	1
5	1	1	1	1	0
6	4	5	6	6	5
7	3	2	2	2	0
8	5	5	5	6	6
9	1	0	0	3	0
AVERAGE	2.13	2.13	2.63	3.13	1.75

Subjective Ratings

- To be determined by the LAC
- Lower number (less significant effect) is more favorable

10	Significance of Land Use Displacement
11	Significance of Proximity to Nearby Ecologically Important Areas
12	Significance of Proximity to Nearby Surface Water
13	Significance of Proximity to Nearby Archaeological and Cultural Resources
14	Significance of Proximity to Nearby Parks and Recreation Facilities
15	Significance of Proximity to Nearby Public Commercial Facilities
16	Environmental Justice: Significance of Location Relative to Identified Community Disamenities
17	Significance of Effect on Established Public View Planes

Subjective Ratings (Reverse)

- Lower number (less significant effect) is more favorable
- Applied rating is reverse of submitted rating
- Example:

  Significance of Proximity to Nearby Ecologically Important Areas (direct and indirect effects of the location of the landfill relative to ecologically important areas within one-half-mile, with 0 being no effect and 6 being extremely significant effect)

  - Site 1 Submitted Rating = 4, based on a significant effect to a bird sanctuary 0.1 miles away

    Applied Rating = $6 - 4 = 2$

Applied Rating Conversion

Significance of Proximity to Nearby Ecologically Important Areas, Site 1

ID	SPEIA1	SPEIA2	SPEIA3	SPEIA4	SPEIA5
2	1	1	1	4	0
3	0	0	0	2	2
4	2	3	6	1	1
5	1	1	1	1	0
6	4	5	6	6	5
7	3	2	2	2	0
8	5	5	5	6	6
9	1	0	0	3	0
AVERAGE	2.13	2.13	2.63	3.13	1.75

Conversion $6 - A$

SITE ID	RATING: SPEIA
1	3.88
2	3.88
3	3.38
4	2.88
5	4.25

*Disclaimer: Numbers are rounded to two decimal places

Score

- Average Weight x Average Rating (per Site) = Score

	Significance of Proximity to Ne
AVERAGE	56.88

x

SITE ID	RATING: SPEIA
1	3.88
2	3.88
3	3.38
4	2.88
5	4.25

=

SCORE: SPEIA
220.39
220.39
191.95
163.52
241.72

Objective Ratings

- Calculated based on measurable parameters

1	Landfill Capacity
2	Land Acquisition, Landfill Development, and Roadway Improvement and Infrastructure Costs
3	Time to Acquire Land and Develop Landfill
4	Location Relative to H-POWER
5	Effect on Traffic and Roadway System
6	Effect of Precipitation on Landfill Operations
7	Location with regard to Important Agricultural Lands of the Hawai'i Land Use Commission
8	Location with regard to the Board of Water Supply No Pass Zone
9	Municipal Water Wells within 1,000 feet

Objective Ratings Type 1 (Direct)

- Based on the favorability of a site relative to the most favorable site
- Higher number = more favorable
- Example 1: Landfill Capacity
  - Site 1: $50\ \mathrm{M\ yd^3}\ \mathrm{X}\ \frac{1}{50\ M\ yd^3}\ \mathrm{X}\ 6 = 6$
  - Site 2: $25\ \mathrm{M\ yd^3}\ \mathrm{X}\ \frac{1}{50\ M\ yd^3}\ \mathrm{X}\ 6 = 3$

Objective Ratings Type 2 (Inverse)

- Based on the favorability of a site relative to the most favorable site
- Lower number is more favorable
- Example 2: Location Relative to H-POWER
  - Site 1: 20 mi $\frac{10\ mi}{20\ mi}\ \mathrm{X}\ 6 = 3$
  - Site 2: 10 mi $\frac{10\ mi}{10\ mi}\ \mathrm{X}\ 6 = 6$

Objective Ratings Type 3 (Binary)

- Based on whether a site is “within or outside of”
- Higher number is more favorable
- Example 3: Location with regard to Important Agricultural Lands of the Hawai‘i Land Use Commission
  - Site 1: Within IAL = 0
  - Site 2: Outside of IAL = 6

Rankings Determination

- Sum of scores for all criteria determines rankings
- Maximum score = Sum of average weights x 6
- Higher total score = higher ranking

SITE ID	FINAL SCORES	FINAL PERCENTAGES	FINAL RANKINGS
1	2676.50	40.04%	4
2	2380.76	35.61%	5
3	2811.38	42.05%	3
4	2898.05	43.35%	1
5	2872.91	42.97%	2
	6685.13	Maximum Score	

Evaluation Schedule

- Meeting 5
  - Final Criteria
  - Homework: Criteria Weighing
- Meeting 6
  - Weights revealed
  - Sites revealed
  - Homework: Subjective Criteria Rating
- Meeting 7
  - Scores and Rankings Revealed

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Announcements

- Homework: Weights
- LAC Meeting #6 – March 7, 2022 (Tentative)

Adjournment

THANK YOU FOR YOUR PARTICIPATION!